Torch-X™ Mounted

Weapon-integrated Battle Management System for multi-domain warfare

Elbit Systems™
C4I and Cyber

Torch-X Mounted

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Strategic and operational need

Modern combat vehicles are more mobile, lethal and protected than their predecessors. The integration of more "on platform" weapons, sensors, C⁴ISREW and active protection systems – if not managed correctly – places an unnecessary cognitive load on the combat vehicle crew.

Solution Overview

Torch-X Mounted is a networked weapon-integrated battle management solution. The centralized user interface combines all platform sensors and effectors, providing the commander and crew with a single interface for unified/integrated situation awareness and sensor/effector operation. Torch-X Mounted delivers a full-scale solution at the platform level and the combat team level, increasing combat effectiveness of the combined force. The system's modular architecture and extensive knowledge base makes it simple to integrate with any platform type, and with any platform sensor and effector.

AI-based decision support: Designed to meet the challenges of multi-domain warfare against a peer adversary, Torch-X Mounted optimizes the use of sensors and effectors at the platform and combat team level.

Open architecture: Designed as an 'evergreen' ecosystem that can accommodate third party applications and provide the development environment for future growth and requirements. Torch-X Mounted supports the Generic Vehicle Architecture (GVA) to enable seamless integration with sensors and effectors.

Intuitive user experience: A simple, intuitive and configurable user interface, the application enables multi-interface control and connectivity with communication systems, sensors and devices to generate common real-time, reliable and accurate situation awareness. This allows the platform crew to fight and win under the most adverse combat conditions.

Security: The battle management system is designed and developed as a secured system from the ground up. The system is accredited for the Five Eyes secret network and is compliant with the relevant security standards. Torch-X Mounted is penetration tested on a regular basis and updated to withstand new emerging cyber security threats.

Torch-X Mounted

Integrated combat networked solution for fighting vehicles

Comprised of sophisticated building blocks, including comprehensive C^2 applications, advanced computing terminals, tactical multimedia routers and communications systems, Torch-X Mounted delivers a truly integrated combat networked solution for today's battlefield platforms. A mature and battle-proven solution, Torch-X Mounted has been successfully integrated into a variety of tracked and wheeled platforms worldwide and with a broad spectrum of weapon systems, sensors and radios from a range of manufacturers and vendors.

High-performance ruggedized computing terminals

Tactical computers and displays with different configurations run the Torch-X Mounted software and serve as the user interface for the vehicle's crew. Advanced capabilities are based on gunner/commander sight video processing, including video motion detection, tactical overlays displayed over video and common sight language between platforms.

The high-performance computing terminals support the computing demands required for various applications conforming to the GVA standard.

Central computing, voice and data switching and routing unit

The Tactical Server and Multimedia Router (SmarTMR) includes a powerful server, voice intercom, vehicle LAN, tactical voice and data network access and remote radio access for fighting vehicles.

Advanced tactical communications system

Elbit Systems' TIGER™ tactical networking service is a sophisticated middleware that resides between the BMS applications and the tactical media bearers, providing seamless communication integration between the platform and surrounding mounted and dismounted networked nodes. The system operates over heterogeneous media bearers with variant communication attributes, creating a seamless and unified "tactical internet" while masking the underlying complexities of the network from the applications and their operational users.

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Key Features

- Seamless integration of platform sensors, effectors and communication systems
- Unified HMI for Common Operational Picture, platform weapon and sensor operation
- AI decision-support tools to reduce cognitive load from commanders and crew
- Tactical Server and Multimedia Router (SmarTMR)
- Near real-time targetable data distribution – targets hand off
- Simple integration with the platform's autonomous unmanned detachable sensors and effectors
- Revolutionary automated network management and communication configuration
- TIGER™ tactical internet

Key Benefits

- Optimizing battle resources and bringing strategic capabilities to the tactical edge
- Enhanced platform lethality and force effectiveness
- Enhanced platform survivability
- Seamless communication integration
- Fast target hand off between platforms
- Enhanced force situational awareness, collaboration and synchronization
- Battle-proven, secure and safe

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